

ABSTRACT OF THE DISCLOSUREALKALINE CELL WITH IMPROVED CATHODE

An alkaline cell having an anode comprising zinc, an aqueous alkaline electrolyte, a cathode mixture comprising cathode active material comprising copper oxide or copper hydroxide. Graphitic carbon, preferably expanded graphite or graphitic carbon nanofibers are added to the cathode mixture thereby resulting in a sharp drop in cathode resistivity.

Addition of sulfur to cathode mixtures comprising copper hydroxide active material improves performance. The sharp drop in cathode resistivity resulting from the addition of expanded graphite or graphitic carbon nanofibers makes the cell suitable for use as a primary alkaline cell having good capacity. The graphitic carbon, preferably comprises preferably between about 3 and 10 percent by weight of the cathode. The carbon nanofibers have an average diameter desirably less than 500 nanometers, preferably between about 50 and 300 nanometers.

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